

Smiet, and Khokhar 1981), revealed that *Nesokia* spends prolonged periods underground, surfacing only occasionally, invariably in darkness. Its principal food, we found, was rhizomes of grasses and succulent roots. It is, therefore, not an ecological competitor with

*Ellobius* in arid mountainous tracts.

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## REFERENCES

- BOBRINSKII, N.A., B.A. KUZNEKOV & A.P. KUZYAKIN (1965): Synopsis of the Mammals of the USSR, Moscow, (in Russian)
- FULK, G.W., A.C. SMIEI & A.R. KHOKHAR (1981): Movements of *Bandicota bengalensis* and *Nesokia indica* in rice fields in Sind *J. Bombay nat. Hist. Soc.* 78(1): 107-112.
- GRZIMEK, BERNHARD, Editor in Chief (1975): Animal Life Encyclopedia, Vol. 11, Van Nostrand Reinhold Co., New York.
- LAY, D.M. (1967): A study of the Mammals of Iran Resulting from the Street Expeditions of 1962-63, *Fieldiana: Zoology*. Vol. 54. Chicago.
- NOWAK, RONALD M., (1991): Walker's Mammals of the World, Vol. 2, John Hopkins Press, Baltimore.
- ROBERTS, T.J. (1977): Mammals of Pakistan, 1st edn. Ernest Benn Ltd., London.

### 5. *MENOPON GALLINAE* INFESTING GREATER ADJUTANT STORK *LEPTOPTILOS DUBIUS* AT NAGAON, ASSAM

Numerous reports on the occurrence of the poultry louse *Menopon gallinae* on poultry and wild birds are available (Soulsby 1968) but there appears to be no report on the occurrence of *M. gallinae* on the greater adjutant stork *Leptoptilos dubius* (Gmelin). The greater adjutant stork is the most endangered species of stork in the world (Rahmani *et. al.* 1990). Only a small viable population is surviving in the Brahmaputra valley, Assam (Saikia and Bhattacharjee 1989). These storks are mainly scavengers, but during the breeding season they prey on living creatures. In the non-breeding season, they are found at garbage dumps in some towns of Assam. At such foraging sites they can be seen with vultures *Gyps* spp., black kites *Milvus migrans*, crows *Corvus* spp. and other scavengers. The garbage generally contains inedible parts of slaughtered animals, which are readily eaten up by adjutant storks.

In 1995 in Nagaon, a juvenile greater adjutant stork was observed sitting continuously on a mound in a shallow river for more than 24 hours. It was too weak to walk and fell down

frequently when it tried to walk. We brought it to our field laboratory for study and to render first aid.

The bird was seen to be heavily infested with tiny, flat, mobile, wingless arthropods. They were removed with a soft brush and preserved in glass vials for identification. They were cleared in 10% KOH solution, fixed in 10% formalin and permanent slides were prepared. At the College of Veterinary Science, Assam Agricultural University, Guwahati, they were identified as the common poultry louse *Menopon gallinae*.

The infested bird was treated first with a repellent extract of deodar and vegetable oils. Later, it was treated with Carbaryl Dust Notix (Carbaryl 5%, Inerts q.s.). Within ten days, the lice had almost disappeared.

After we gave it medicine for liver disease and drops of astozyme, it recovered quickly and became a voracious feeder. Soon it could stand on its feet, and on the third day it had almost recovered. We kept it for two months under observation and then released it into the wild.

*Menopon gallinae* (Family Menoponidae, Order Mallophaga) is a well known insect ectoparasite (Noble and Noble 1974). It is pale yellow in colour. The male is 1.71 mm and the female 2.04 mm. The thoracic and abdominal segments each have a row of bristles. This species is found in all domestic and wild birds, including turkey, guinea fowl, ducks and pigeons (Levine 1983). The eggs are laid in clusters on the host feathers and the life cycle is completed on the same host. The eggs hatch in two to three weeks. These lice are not blood ingesters, they feed on the barbs and scales of the host feathers. They do not infest young chicks, presumably because chicks lack well developed feathers (Cheng 1982).

In most birds, heavy infestation is generally encountered during winter. Birds affected by lice are restless because of the irritation. They become so restless that they cannot feed or sleep properly. Birds scratch their bodies to get rid of the lice and injure themselves, which leads to complications. The infestation apparently causes reduced egg production in

birds, and increases the host's susceptibility to bacterial, viral and protozoal diseases.

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## REFERENCES

- CHENG, T.C. (1982): General Parasitology. Academic Press, London. pp. 803-805.
- LEVINE, N.D. (1983): Text Book of Veterinary Parasitology. CBS Publishers and Distributors, Delhi. pp. 140-150.
- NOBLE, E.R. & G.A. NOBLE (1974): Parasitology The Biology of Animal Parasites. 3rd Edn. Lea and Febiger, Philadelphia. pp. 366-367.
- RAHMANI, A.R., G. NARAYAN & L. ROSALIND (1990): Status of Greater Adjutant Stork (*Leptoptilos dubius*) in the Indian Subcontinent. *Colonial Waterbirds*. 13(2): 139-142.
- SAIKIA, P. & P.C. BHATTACHARJEE (1989): A Preliminary Survey of Adjutant Storks in Assam. *Asian Wetland News* 2(2): 14-15.
- SOULSBY, E.J.L. (1968): Helminths, Arthropods and Protozoa of Domestic Animals. 6th Edn. ELBS & Baillere, Tindall & Cassell Ltd. London. pp. 368-377.

## 6. STRANGE DEATH OF A SHIKRA

Deep in the desert, southwest of Jaisalmer in Rajasthan, I was watching a shikra (*Accipiter badius*) flying very low over the sandy plain. Suddenly it gained height, dived to the ground, then flew up, with a rodent in its talons. Through the binoculars I could not identify the species of

the small mammal. Having settled over an electric wire the shikra started feeding on the prey. While the raptor was feeding on the body of the rodent, the tail was dangling below. The bird shifted its posture and the rodent's tail touched the electric pole-bar below, there was a